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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/702,104	11/04/2003	Gregory B. Altshuler	105090-0129	6794
21125	7590	09/28/2005	EXAMINER	
NUTTER MCCLENNEN & FISH LLP WORLD TRADE CENTER WEST 155 SEAPORT BOULEVARD BOSTON, MA 02210-2604			JOHNSON III, HENRY M	
			ART UNIT	PAPER NUMBER
			3739	

DATE MAILED: 09/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/702,104	Applicant(s) ALTSHULER ET AL.	
	Examiner Henry M. Johnson, III	Art Unit 3739	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 August 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 4-17, 19-23 and 56-73 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-17, 19-23 and 56-73 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 081605
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Applicant's arguments filed 18 August 2005 with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

The indicated allowability of claims 10 and 15 is withdrawn in view of the newly discovered reference(s) to Altshuler et al. and re-evaluation of Lerner et al. Rejections based on the newly cited reference(s) follow.

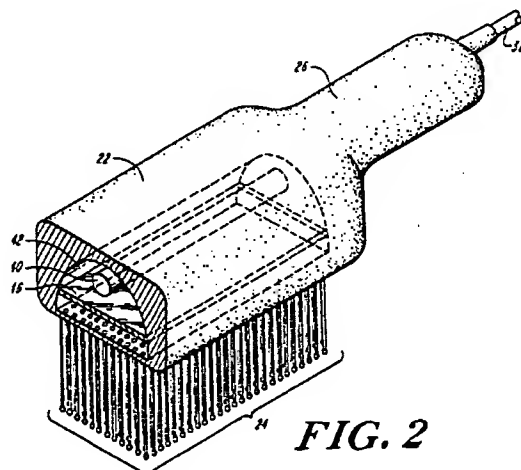
Claims 1, 2, 4-17, 19-23 and 56-73 are pending.

Claim 4 is objected to because of the following informalities: the claim is inconsistent with a protuberance with a skin contacting surface as cited in the independent claim.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 15 and 73 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,300,097 to Lerner et al. Lerner et al. teach a handheld device for treating a skin condition with optical fiber protuberances for contacting the skin and an optical source (Fig. 2, # 40) positioned to provide radiation via the fiber optics. The optical



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fibers are interpreted as forming a brush. The fibers are capable of providing force to the skin. The optical source is a tungsten or mercury discharge lamp (Col. 2, lines 40-41) mounted in the applicator head (Fig. 2) and inherently must have a socket for mounting, the socket inherently drawing heat away from the source into the head and handle. Lerner et al. disclose two different wavelengths (Fig. 4B, switch for UVA or UVB) and the source is controlled by a timer with no disclosed pulsing, making the radiation continuous.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 2, 4-14, 19-21 and 56-72 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,300,097 to Lerner et al. in view of U.S. Patent 6,273,884 to Altshuler et al. Lerner et al. are discussed above, but do not teach a total internal reflecting mechanism. Altshuler et al. teach an apparatus for using optical radiation to treat dermatological problems that includes a light delivery mechanism which normally has total

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internal reflection so that light or other radiation entering the lens is reflected through the lens, however, when the lens is in contact with the patient's skin, the total internal reflection at the skin-contacting surface is broken due to the change of index of refraction at this surface so that light energy is emitted from the lens into the patient's skin (Col. 16, lines 20-29). Altshuler et al. also discloses the use of multiple diodes as sources for individual optical channels (Col. 15, lines 45-50). The multiple diode sources are interpreted as an array.

Regarding claims 6 and 7, Lerner et al. disclose the radiation provided may be from 1-10 mW/cm² or from 30-1000 mw/cm² (col. 2, lines 47-49).

Regarding claim 13, the source is controlled by a timer with no disclosed pulsing, making the radiation continuous.

Regarding claims 19-20, the source is within the handheld unit (Fig. 2).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the internal reflecting mechanism as taught by Altshuler et al. in the invention of Lerner et al. to contain the radiation when not in contact with skin as a safety feature as suggested by Altshuler et al.

Regarding claims 59 and 60, the multiple diode sources are selected based on the intended use. Those skilled in the art determine the wavelength or wavelengths required for the treatment and would select the sources accordingly. Thus, it would be obvious to one skilled in the art to select diodes of the same or different wavelengths.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,300,097 to Lerner et al. in view of U.S. Patent 6,273,884 to Altshuler et al. as applied to claim 1 above, and further in view of U.S. Patent 6,572,637 to Yamazaki et al. Lerner et al. and Altshuler et al. are discussed above, but do not teach a means for detecting contact of the

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device with a treatment area. Yamazaki et al. disclose a handheld laser skin treatment device that includes a microswitch responsive to adjuster's touching the skin for making the electric power supply to turn on, and responsive to adjuster's leaving the skin for making the electric power supply to turn off (Col. 3, lines 24-27). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the contact sensor as taught by Yamazaki et al. in the invention of Lerner et al./Altshuler et al. to avoid radiation of unintended areas as an alternative or backup to the internal reflection mechanism.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,300,097 to Lerner et al. in view of U.S. Patent 6,273,884 to Altshuler et al. as applied to claim 1 above, and further in view of U.S. Patent 5,445,608 to Chen et al. Lerner et al. and Altshuler et al. are discussed above and Lerner et al. further teaches the application of treatment substances prior to the radiation (Col. 3, lines 10-15). Chen et al. teach a device for photodynamic therapy using optical sources (abstract). Chen et al. further teaches the concept of introducing the treatment agent via the apparatus wherein the photoreactive agent can then be caused to flow through a lumen so that it perfuses the internal, in vivo treatment site (Col. 4, lines 13-15). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include an agent delivery means as taught by Chen et al. in the invention of Lerner et al./Altshuler et al. as Lerner et al. clearly cites such agents are often required.

Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,300,097 to Lerner et al. in view of U.S. Patent 6,273,884 to Altshuler et al. as applied to claim 1 above, and further in view of U.S. Patent 6,350,276 to Knowlton. Lerner et al. and Altshuler et al. are both discussed above, but do not disclose cooling of the tissue. Knowlton

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discloses an apparatus for treating tissue using energy sources that may be light (Col. 7, lines 55-56). Figure 5, from a cross-referenced (and incorporated) Knowlton patent (6,425,912), teaches energy sources (Fig. 5, # 18) that conform to the skin, the irregular surface forming protuberances. Knowlton teaches cooling of the sources and tissue using a liquid (Fig. 2B, # 15) that can be in a liquid or gaseous state, or may exist in two or more phases and may undergo a phase change as part of its cooling function (Col. 5, lines 29-35), such as melting or evaporation (whereby heat is absorbed by the fluid as a latent heat of fusion or evaporation). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the cooling methodologies as taught by Knowlton et al. in the invention of Lerner et al. as modified by Altshuler et al. as the need for such cooling is well known and clearly suggested by Knowlton et al. when radiating tissue.

Double Patenting

Applicant is advised that should claim 9 be found allowable, claim 57 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Conclusion

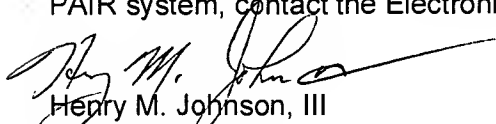
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 6,229,831 to Nightingale et al. teaches the coupling of diode arrays to arrays of optical delivery and heat sinks for cooling of the individual sources.

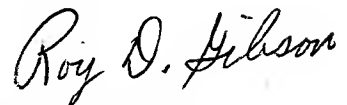
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry M. Johnson, III whose telephone number is (571) 272-4768. The examiner can normally be reached on Monday through Friday from 6:00 AM to 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda C. Dvorak can be reached on (571) 272-4764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Henry M. Johnson, III
Patent Examiner
Art Unit 3739


ROY D. GIBSON
PRIMARY EXAMINER